

Arizona plant with a name other than *Eschscholtzia californica*, and specific names such as *E. mexicana* Greene, *E. aliena* Greene, *E. Jonesii* Greene, *E. arizonica* Greene, and *E. paupercula* Greene (cf. Greene loc. cit. pp. 260-263) are merely metonyms.

It is noteworthy that flower color is more variable than in the California forms of the species. In the poppy fields near Tucson colors included orange, yellow with orange center, white with yellow center, white, and numerous variations in color intensity within the major groups. Similar color-types occur in California, but those other than orange or orange-yellow are uncommon in the spring-time, while in Arizona they are remarkably prominent.

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The Names of Cornus

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So early as 1833 Lindley, in founding his genus *Benthamia* (Bot. Reg. 19: 1579 et seq.), remarked "We do not understand upon what principle this very distinct genus has been combined with *Cornus*, from which it differs essentially both in flower and fruit. Whether or not *C. florida*, which agrees with it in habit, is also a species of *Benthamia*, our materials do not enable us to determine." In 1828 Rafinesque (Med. Bot. 132) had distinguished *C. florida* as section *Cynoxydon*, which in 1838 he elevated to generic rank (Alsog. Am. 59). This early tendency to divide the genus has continued, with varying success, until modern times. For instance, Moldenke (Rev. Sudam. Bot. 6: 177. 1940) says: "There is certainly no doubt in my mind that the genus *Cornus* as regarded by many botanists today is actually an aggregate of several distinct generic elements. The true genus *Cornus* is typified by *Cornus mas* L. and contains the so-called Cornelian-cherries. The cornels or osiers represent the genus *Svida*, the bunchberries represent the genus *Chamaepericyclmenum*, the American flowering-dogwoods represent the genus *Benthamidia*, and the Asiatic flowering-dogwoods with their coalesced fruit represent the genus *Benthamia*."

Aside from the taxonomic question here involved, the nomenclature of these segregates repays scrutiny. To begin at the beginning, when Lindley founded *Benthamia* (l.c.) he said of the name: "The Benthamia of Achille Richard being the same as Herminium, we have great pleasure in availing ourselves of the present opportunity of naming this very distinct genus in compliment to our highly valued friend George Bentham, Esq." The sentiment did him honor, but the result is inconformable with our rules of nomenclature, *Benthamia* Richard, an orchid, having been validly published in *Mém. Soc. Hist. Nat. Paris* 4: 37 (1838).¹

Benthamidia Spach (*Hist. Vég. Phan.* 8: 106. 1839) is antedated by *Cynoxylon* Raf. (l.c.). I cannot agree with Farwell (*Rhodora* 34: 29-30. 1932) that *Cynoxylon* was not intended for generic rank. It is true that Rafinesque did not make combinations under his new name; true also that he did not always make his intentions plain. But to unriddle Rafinesque's intentions and, above all, to expect consistency in his writings, are beyond the powers and the prerogatives of a scientist. Speaking of his segregates as "G. or subgenera," he lists "255. Subg. MESOMERA Raf. 256. subg. KRANIOPSIS Raf. 257. EUKRANIA Raf. 258. CYNXYLON Raf. 259. BENTHAMIA Lind." (l.c. 58-59). Each is briefly characterized. He goes on to "mention all the true Cornus," the species included in the first two groups.

Eukrania Raf. (l.c.) included as "types"² *C. mascula*, *C. canadensis*, *C. suecica*. Of this odd assortment *C. mas* L. ("*C. mascula*") has been designated as the type of *Cornus* L. The change in the circumscription of *Eukrania* by the removal from it of *C. mas* (or, to put it differently, the division of the genus) does not invalidate the name, which must be retained if the "bunchberries" are to be treated as a genus. *Eukrania* Raf. of course antedates *Chamaepericylmenum* Graebner (*Asch. & Graebner. Fl. Nordostdeuts.*

¹ It is interesting also to note a previous abortive attempt by Lindley to name a genus after Bentham (*Nat. Syst.* 241. 1830, nomen nudum), apparently a genus of Boraginaceae and according to A. de Candolle (*Prodr.* 10: 118. 1846) used on labels in the garden of the Horticultural Society.

² Rydberg wrote (*Bull. Torrey Club* 33: 147. 1906) that Rafinesque made *C. mas* "the type" of the genus. In 1839 Rafinesque was far from designating nomenclatural types in the modern sense. Actually he named three species as "types," by which he must have meant "typical."

Flachl. 539. 1898), and *Cornella* Rydb. (Bull. Torrey Club 33: 147. 1906).

Svida is derived from a Czech word for dogwood. Opiz (Seznam 94. 1852) made it a genus-name and referred to it *C. sanguinea* L., the common European shrub called dogwood in England,³ and *C. alba* L., related to our *C. stolonifera* Michx.; but failed to describe it. Indeed, we can infer his intention to divide *Cornus* only from the existence of *C. mas* on page 33 of his flora. Such a procedure, though legitimate at the time, is contrary to our present rules. *Svida* was first validly published by Small in 1903 (Fl. SE. U. S. 853).

There are those who say that such a disturbance of the dead bones of nomenclature can be prompted only by the disturber's desire to see his name after new names and combinations. Perhaps I should grasp the opportunity to give the Asiatic flowering dogwoods a legitimate name and to make new combinations under *Eukrania* Raf. emend. But botanical bibliography is the servant of taxonomy; this catalogue of oversights is only incidental to the revaluation of the groups. The point is that a consideration of the genus *Cornus* over its entire range renders its division far less easy.

Cornus Volkensii Harms (in Engler, Pflanzenw. Ost-Afr. C: 301. 1895), the only known species in Africa, has a paniculate inflorescence much like that of the European *C. sanguinea* but enclosed in four early deciduous bracts like those characteristic of *C. mas* (southeastern Europe and western Asia). The drupe is ellipsoidal as in *C. mas* but dark-colored as in *C. sanguinea*. It fits neatly as an intermediate between the sections which include these species. *C. disciflora* Moc. & Sessé (ex DC. Prodr. 4: 273. 1830) of Mexico has the "capitate" inflorescence (a reduced panicle) of our *C. florida* but its four bracts are small and early deciduous as in *C. mas* and *C. Volkensii*; its drupe is ellipsoidal and dark-colored. There seems to be a tendency toward dioecism (characteristic of several genera of Cornaceae) in both *C. Volkensii* and *C. disciflora*. The conrescence of the fruit characteristic of the Asiatic *C. Koussa* seems hardly to warrant generic segregation, especially since it is approached by *C. Nuttallii* of our west coast.

³ Not, of course, an "osier," though *C. stolonifera* is often called the "red osier." Osiers are properly willows; the name has sometimes been used for other withe-like shrubs similarly used in Europe for constructing wattles.

As for *Eukrania*, it bases its claims to recognition on its "herbaceous" habit and the presence of a small dorsal horn on the petals.⁴ In several characters it is intermediate between *C. florida* and the ebracteate dogwoods.

I do not know what we are to understand by such expressions as "an aggregate of generic elements." They may signify that *Cornus* (sensu lato) is polyphyletic, distinct genera having been merged; or that an original stock has become diversified. The latter seems more plausible. Certainly in our ignorance of the history and cytogenetics of the group the burden of proof must fall on him who expounds a polyphyletic origin; present judgment seems premature. If they are really as closely related as they seem to be, I see nothing to be gained by segregating in distinct genera the seven (not five) recognizable sections of *Cornus*.

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Phyllanthus nummulariaefolius Poir. in the United States

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About five years ago correspondents in Brazil and the Panama Canal Zone sent me seeds of an undetermined species of *Phyllanthus* which they described as a polymorphous and aggressive weed. I planted these seeds in a hothouse, grew out of them a sizable crop of specimens and satisfied myself that *P. nummulariaefolius* Poir. was the entity that had been collected. This plant has proved to be as aggressive and as polymorphous in the hothouse as it has been reported to be in nature, and I must now carefully eradicate it several times a year. The size of the specimens varies from a few inches tall, when the plants happen to grow on a dry bench, to about three feet for material favored by good conditions of soil and temperature.

Pressed specimens of the same plant have also reached me from Argentina, Brazil, Panama and the French West Indies, showing that it is widespread in every one of the tropical American coun-

⁴ Rydberg (l.c.) said on the sepals; surely an error.